
Square Patterns

This problem gives you the chance to:

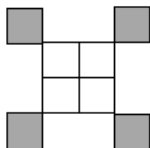
- work with a sequence of tile patterns
 - write and use a formula
-

Mary has some white and gray square tiles.

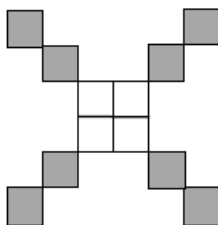
She uses them to make a series of patterns like these:



Pattern
#1



Pattern
#2



Pattern
#3

1. How many gray tiles does Mary need to make the next pattern?

2. What is the total number of tiles she needs to make pattern number 6?

Explain how you figured it out.

3. Mary uses 48 tiles in all to make one of the patterns.

What is the number of the pattern she makes?

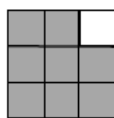
Show your work.

4. Write a formula for finding the total number of tiles Mary needs to make pattern # n .

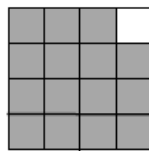
Mary now uses gray and white square tiles to make a different pattern.



Pattern
#1



Pattern
#2



Pattern
#3

5. How many gray tiles will there be in pattern # 10? _____

Explain how you figured it out.

6. Write an algebraic formula linking the pattern number, P , with the number of gray tiles, T .
